

We Claim:

1. A medical decision support system, comprising:
a processor;
5 a memory device;
an input for acquiring gene expression data, said input associated with a first classifier/predictor module;
an input for acquiring clinical information, said input associated with a second classifier/predictor module; and
10 a program available to said processor comprising a combination algorithm.
2. The system of claim 1, further comprising an output device.
- 15 3. A method for support a medical decision on a computer system, comprising the steps of:
(a) classifying genetic expression information using a first classifier/predictor module to provide classified gene expression information;
(b) classifying clinical information into a second classifier/predictor
20 module to provide classified clinical information; and
(c) combining said classified genetic information and said classified clinical information into a predicted outcome.
4. The method of claim 3, wherein said steps (a) and (b) include at least
25 one of an EFuNN process and a Bayesian process.
5. A computer system to support a medical decision, comprising:
a processor; and

a memory device having classified gene expression information and classified clinical information stored thereon.

6. The computer system of claim 5, further comprising a predicted
5 outcome based on combined classified gene expression information and clinical information stored on said memory device.

7. A method for extracting relationship rules between sets of genes and clinical variables common for patients of a group substantially as herein
10 described.